

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Junichi TAKASHIMA et al. :

Serial No.: 10/594,921 : Group Art Unit: 1795

Filing Date: September 29, 2006 : Examiner: Christopher D. Rodee

For: PRODUCTION PROCESS OF POLYMERIZED TONER

DECLARATION UNDER 37 CFR 1.132

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Junichi TAKASHIMA declares that:

1. He is an engineer of Nippon Zeon Co., Ltd. and has been engaged in various aspects of research work with respect to the research and development of toners. He is familiar with the present application Serial No. 10/594,921 filed September 29, 2006, and is familiar with the Office Action dated December 31, 2009 and the references cited therein.

2. In response to the Office Action, the following experiments were carried out either by him or otherwise carried out under his direct control and supervision.

Experiment 1:

A polymerization reaction was carried out in the same manner as in Example 1 of the specification except that the heating rate upon the polymerization in Example 1 was changed as shown in Table 1 in accordance with the teachings of Yamada's Example 1. The results are shown in Table 1. Table 1 also contains the results of

Example 1 and Comparative Example 1 in the present specification.

Table 1

	Experiment 1	Example 1	Comp. Ex. 1
Polymerization conditions			
Surface roughness Ry of polymerization container (μm)	0.3	0.3	4
Heating rate (room temperature-80°C) (°C/h)	50		
Heating rate (room temperature-85°C) (°C/h)		40	40
Heating rate (80-85°C) (°C/h)	10		
Heating rate (85-90°C) (°C/h)	7	15	15
Times of continuous polymerization	5	5	5
Polymerized toner			
First time			
Volume average particle diameter dv (μm)	6.5	6.4	6.9
Particle diameter distribution dv/dp	1.18	1.18	1.25
Amount of gel (%)	62	56	58
Fifth time (after 5-batch continuous polymerization)			
Volume average particle diameter dv (μm)	6.6	6.5	7.1
Particle diameter distribution dv/dp	1.20	1.19	1.32
Amount of gel (%)	61	55	59
Polymerization time (heating time + reaction time)			
First time	13.5	13.0	13.0
Fifth time (after 5-batch continuous polymerization)	14.5	13.5	15.5
Amount of scale (% by weight)			
First time	1.5	1.0	3.7
Fifth time (after 5-batch continuous polymerization)	4.2	2.6	12.4
Fixing temperature (°C)			
First time	210	190	200
Fifth time (after 5-batch continuous polymerization)	200	180	190
Storability (%)			
First time	0.4	0.5	0.2
Fifth time (after 5-batch continuous polymerization)	1.0	0.6	2.1
Printing density			
First time	1.40	1.42	1.41
Fifth time (after 5-batch continuous polymerization)	1.45	1.44	1.56
MI value 150°C x 10 kg)			
First time	2.0	4.2	3.5
Fifth time (after 5-batch continuous polymerization)	3.0	5.6	10.2

3. Junichi TAKASHIMA declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

Junichi Takashima

Junichi TAKASHIMA

April 22, 2010

Date